

IN THE CLAIMS:

Please enter the following claims:

1. (currently amended) A method of fabricating a micro-electromechanical system (MEMS) variable capacitor comprising the steps of:

a) depositing a first dielectric layer on a substrate, said first dielectric layer having at least one cavity etched therein;

b) forming an actuation electrode by filling with metal ~~and then~~ followed by planarizing said at least one cavity;

c) depositing a second dielectric layer on said first dielectric layer, and etching at least one cavity therein;

d) filling and planarizing said at least one cavity in said second dielectric layer with sacrificial material;

e) depositing a third dielectric layer on said second dielectric layer and etching at least one cavity therein;

f) forming a ground plane electrode by filling with metal and then planarizing said cavity in said third dielectric layer;

g) forming a plurality of metal lines on top of said third dielectric layer interconnected by way of conductive vias;

h) embedding elastomeric material between said conductive vias; and

i) selectively removing said second and third dielectric material surrounding said metal lines and said ground electrode, and etching away said sacrificial material.

2. (currently amended) The method as recited in claim 1, wherein steps g) and h) further comprise the steps of:

forming said conductive vias above said ground electrode in said third dielectric layer;

etching away dielectric material surrounding said conductive vias;

depositing said elastomeric material ~~above~~ in gaps separating said etched conductive vias; and

planarizing said elastomeric material.

3. (original) The method as recited in claim 1, wherein steps g) and h) further comprise the steps of:

etching a cavity in a fourth dielectric layer deposited on said third dielectric layer;
depositing said elastomeric material in said etched cavity; and
forming conductive vias within said elastomeric material.

4. (withdrawn)

5. (withdrawn)

6. (currently amended) The method as recited in claim 1, wherein ~~said~~ actuation electrodes are separated from ~~said-ground~~ grounded electrodes by an air gap.

7. (currently amended) The method as recited in claim ~~[[1]]~~ 6 wherein a voltage applied between said actuation electrodes and said ~~ground~~ grounded electrodes creates an attraction force on said ~~ground~~ grounded electrodes and said metal lines, inducing movement of said ~~ground~~ grounded electrodes with respect to said actuation electrodes.

8. (canceled)

9. (currently amended) The method as recited in claim 1, wherein said conductive vias are separated from each other by said ~~deformable~~ elastomeric material ~~said elastomeric material providing mechanical stability and improving reliability.~~

10. (withdrawn)

11. (withdrawn)

12. (withdrawn)

13. (withdrawn)

14. (withdrawn)

15. (withdrawn)

16. (withdrawn)